

Appl. No.: 10/553,365

Reply to Office Action of: 05/13/2009

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An apparatus comprising:

a camera module for capturing an image and providing digital data in an RAW format; and

an application processor including both a CPU for controlling the operation of a telephone and hardware arranged to perform camera image processing on the digital data in the RAW format received from the camera module, wherein the application processor includes a programmable hardware accelerator and the programmable hardware accelerator is a SIMD processing accelerator optimized for camera image processing, and wherein the apparatus is a mobile camera telephone.

2. (Previously presented) An apparatus as claimed in claim 1, wherein the camera module comprises optics, an image sensor and an analogue to digital converter only, and is without image processing facility.

3. (Previously presented) An apparatus as claimed in claim 1, wherein the digital data is the digitized output of an image sensor.

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4. (Withdrawn) A mobile camera telephone as claimed in claim 1 wherein the camera module comprises reducing means for reducing the size of the provided digital data.

5. (Withdrawn) A mobile camera telephone as claimed in claim 4, wherein the reducing means involves bit depth reduction.

6. (Withdrawn) A mobile camera telephone as claimed in claim 4, wherein the reducing means involves lossless compression and the application processor includes means for lossless decompression before image processing.

7. (Withdrawn) A mobile camera telephone as claimed in claim 1, wherein the camera module further comprises means for predetermined and limited image processing.

8. (Withdrawn) A mobile camera telephone as claimed in claim 1, wherein the camera module further comprises gamma correction means for gamma correcting the digital data before its provision to the application processor.

9. (Withdrawn) A mobile camera telephone as claimed in claim 1, wherein the application processor performs camera image processing excluding gamma correction.

10. (Previously presented) An apparatus as claimed in claim 1, wherein the application processor is a system on a chip.

11. (Previously presented) An apparatus as claimed in claim 1, wherein the application processor includes a hard-wired pipeline processor for the camera image processing.

12. (Canceled)

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13. (Canceled)

14. (Currently amended) A method comprising:

capturing an image in a first camera component of a mobile camera telephone;

sending digital data in an RAW format from the first camera component to a second application processing component of the mobile camera telephone; and, in the second application processing component, both image processing the digital data in RAW format to produce an image for viewing and controlling the storage of the image in the mobile camera telephone, wherein the application processor includes both a CPU and a programmable hardware accelerator, wherein the CPU is configured to control the operation of the telephone and the programmable hardware accelerator is a SIMD processing accelerator optimized for camera image processing.

15. (Previously presented) A method as claimed in claim 14, wherein the first camera component comprises optics, an image sensor and an analogue to digital converter only, and is without image processing facility.

16. (Previously presented) A method as claimed in claim 14, wherein the digital data is the digitized output of an image sensor.

17. (Previously presented) A method as claimed in claim 14, wherein the second application processing component is a system on a chip.

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18. (Previously presented) A method as claimed in claim 14, wherein the second application processing component includes a hard-wired pipeline processor for camera image processing.